AMSAT News Service Weekly Bulletins
Issue: ANS-281
Date: 2012-10-07
Sources: amsat-ans-2012-ans-281-weekly.txt

AMSAT NEWS SERVICE
ANS-281

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

In this edition:

* Register Today for the 2012 AMSAT Space Symposium in Orlando
* 2012 AMSAT Symposium Schedule
* Five CubeSats Deployed From ISS Now on-Orbit - Signals Received
* AO-27 Reported Down
* PACIFICON 2012 Will Feature ARISS Contact and Satellite Demo Station
* ARISS Successful School Contacts
* US Naval Academy PSAT Features PSK-31 and APRS Transponders
* Cuba Satellite Group Launches Satellite Net in Havana
* FUNcube Dongle Filtered Preamp Available at AMSAT-UK On-line Store
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-281.01
ANS-281 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 281.01
>From AMSAT HQ SILVER SPRING, MD.
October 7, 2012
To All RADIO AMATEURS
BID: $ANS-281.01

Register Today for the 2012 AMSAT Space Symposium in Orlando

This is a reminder that the 2012 AMSAT Space Symposium will be held on Friday, October 26th through Sunday, October 28th at the Holiday Inn Hotel at Orlando-International Airport.

See the AMSAT Web Store to complete your on-line registration:
http://store.amsat.org/catalog/index.php?cPath'

Symposium Registration including Proceedings
   o Starting September 24, 2012: $ 50.00
   o At the Door: $ 55.00

Downloadable paper registration forms in MS-Word format and PDF format are available on the 2012 Symposium page:
http://www.amsat.org/amsat-new/symposium/2012/index.php

The Symposium Schedule web page has been updated with links to find more information about the planned activities. See:

http://www.amsat.org/amsat-new/symposium/2012/SymposiumSchedule.php

[ANS thanks the 2012 Symposium Committee for the above information]

2012 AMSAT Symposium Schedule

To help you plan your trip to Orlando the 2012 Symposium Committee has posted a high-level schedule of the weekend's events.

Preliminary 2012 Symposium Schedule

Thursday 25 October 2012

AMSAT Board of Directors Meeting 8am - 9pm

Friday 26 October 2012

AMSAT Board of Directors Meeting 8am - Noon
Trips to SkyCraft 9am - Noon
AMSAT Symposium 1pm - 5pm

Saturday 27 October 2012

Symposium 8am - 3pm
AMSAT General Meeting 3:30pm
AMSAT Banquet 6:30pm - 10pm
 + The featured speaker for the AMSAT 2012 Saturday Evening Banquet will be Dr. Samuel T. Durrance, NASA Astronaut/Payload Specialist and Professor of Physics and Space Sciences at the Florida Institute of Technology.

Sunday 28 October 2012

7:30am AMSAT Area Coordinator's Breakfast
Local trip of Interest TBD

Monday 29 October 2012

Special trip to Kennedy Space Center 8am-6pm
The trip will include a round trip bus from the hotel and entrance to the Space Center. The cost will be about $100. This is a wonderful experience for those that haven't been and for those that have been multiple times. We need to get an idea of how many will participate to select the correct bus. Contact Martha if interested

Watch the AMSAT Symposium Web Pages for the latest information:
http://www.amsat.org/amsat-new/symposium/2012/index.php

[ANS thanks the 2012 Symposium Committee for the above information]

Five CubeSats Deployed From ISS Now on-Orbit - Signals Received

Five cubesats launched on July 21 and loaded aboard the ISS were integrated with the J-SSOD small satellite deployer on the the Japanese Experiment Module, also known as Kibo. They were deployed with the Kibo robotic arm on October 4, 2012. The orbit for these

CubeSats will be very close to the orbit of the ISS.

NanoRack posted a photo of the deployment at: pic.twitter.com/wZAX5qZL
(Click on the image to view the full-sized photograph)
SpaceRef posted an article and several more photographs on-line at:
http://spaceref.com/news/viewsr.html?pidB238

+ First Deployment by Astronaut Akihiko Hoshide
  o WE-WISH - Telemetry downlink on 437.505 MHz
  o RAIKO - non-amateur radio Ku-band beacon

+ Second Deployment by JAXA GS
  o TechEdSat - Telemetry downlink on 437.465 MHz.
  o NanoRack/F-1 -
    > 145.980 MHz: main channel, 1.0W RF output, FM, AFSK 1200bps,
    > one telemetry packet every 30 seconds, operates in the dark
    > by default (but can be commanded later to operate in sunlight)
    > 437.485 MHz: backup channel, 0.2W RF output, FM, PWM CW beacon,
    > each beacon transmission lasts about 20 seconds then 60 seconds
    > delay, only operates in sunlight

  o FITSAT-1
    > CW Beacon 437.250 MHz,
    > FM Data   437.445 MHz,
    > High speed data 5840.00 MHz

FITSAT-1 Heard With Strong Signals

Signal reports from PY5LF, OH3UW, DK3WN, VU3TYG, G6LVB (using a FUN-
cube Dongle Pro+ and 7" wire antenna), GW1FKY, F5YG, JE9PEL, JN1GKZ,
ST2NH, and others via the amsat-bb list.

FITSAT-1 transmits its beacon frequency 437.250 MHz. This is the
same frequency as the PRISM satellite of Tokyo Univ. FITSAT CW will
transmit, "HI DE NIWAKA JAPAN" with its telemetry data. To receive
a FITSAT-1 QSL card please send your signal report and your postal
address to: fitsat1@hotmail.co.jp and also cc to tanaka@fit.ac.jp.
A photo of the QSL card is shown at:
http://www.fit.ac.jp/~tanaka/fitsat.shtml
This web page will also be updated with information about the status
of the LED experiment.

HB9FFH has made a telemetry decoder for FITSAT-1, available at:
http://carpcomm.com/satellite/fitsat1

FITSAT students have also developed a similar program for windows:
http://turing.cs.fit.ac.jp/~fitsat/CWFM/FITSAT_CW_Analyzer1.zip

TechEdSat Heard With Weak Signals

Signal reports received from PY5LF, DK3WN, and JE9PEL indicate that
TechEdSat was received with weak signals on its 437.465 MHz downlink.
Mark Allard, KD6CWM, President of the NASA-Ames Research Center Ama-
teur Radio Club reports their OSCAR/ARISS satellite station, NA6MF,
will be supporting TechEdSat as one of the monitoring stations for
the TechEdSat Amateur Radio beacon.

TechEdSat transmits a custom beacon packet. Details can be found at:
http://www.techedsat.com/. Packets acquired from TechEdSat can also
be submitted to the website for decoding by the TechEdSat team. Use
the 'Packet Submission' link found at the top of the web page.

WE WISH SSTV Picture Received

PY4ZBZ and JE1CVL received the SSTV picture on 437.505 MHz.
JE9PEL provided a translation of the image that is a sentence of
"JQ1ZIJ MEISEI ARC 2012". A photo of the received picture is at:
http://www.ne.jp/asahi/hamradio/je9pel/21005wis.png

A photo of the SSTV picture received by PY4ZBZ is posted at:
http://www.qsl.net/py4zbz/satelite.htm#ww

Viet Nam F-1 Not Heard

Viet Nam's F-1 satellite was scheduled to begin telemetry transmissions 30 minutes after deployment by sending a beacon alternating on its main and backup channels. At press time no signal reports have been received from this satellite.

More information and guide to download F-1 telemetry decoder can be found at http://fspace.edu.vn/?page_id'. Decoded data can be submitted via the telemetry decoder or by sending directly to the ground station: thuvt@fpt.edu.vn. Audio recordings are highly appreciated.

[ANS thanks the CubeSat Teams; Vu Trong Thu, XV9AA; Mark Allard, KD6CWM; and Takushi Tanaka, JA6AVG for the above information]

AO-27 Reported Down

AO-27 user reports this week reported that the satellite was not operational. The end-of-transmit cycle AFSK packet telemetry beacon was reported to become stuck on a single tone. No downlink signal was received from AO-27 on later passes.

The latest AO-27 news is posted on its webpage:
http://www.ao27.org/AO27/index.shtml

In summary, as of October 6 control operators had recovered AO-27 to running on the primary Bootloader and were able to turn on the transmitter for a short time. They continue working on uploading the software.

Mode V/U (J) FM Voice Repeater Frequencies

Uplink: 145.8500 MHz FM
Downlink 436.7950 MHz FM

[ANS thanks James, N3UCC and Michael, N3UC for the above information]

PACIFICON 2012 Will Feature ARISS Contact and Satellite Demo Station

An Amateur Radio on the International Space Station (ARISS) contact has been planned with youth participants at PACIFICON 2012, Santa Clara, CA on 13 October. The event is scheduled to begin at approximately 18:57 UTC or 11:57 PDT. The contact will be a telebridge between NA1SS (the ISS) and IK1SLD (in Italy). The contact should be audible over Europe and the Mediterranean. Interested parties are invited to listen in on the 145.80 MHz downlink. The contact is expected to be conducted in English.

PACIFICON 2012, a premiere wireless event, will be held October 12, 13, and 14, 2012 and will host the 2012 American Radio Relay League (ARRL) National Convention and Exposition.

Over 2,500 amateur radio enthusiasts are expected to attend. The 2012 PACIFICON Youth program includes a "Youth Lounge" and forums throughout the convention weekend; the Youth program is positioned in the middle of the exhibit hall and provides STEM educational activities which include hands on radio operation, electronics kit building orbital mathematics, CubeSat satellite design, and popular radio transmitter T-Hunts.

A scheduled ARISS radio contact and a presentation by NASA astronaut, Dr. Lee M. Morin KF5DDB, will highlight the Youth Lounge activities. Free admission is provided to Girl Scouts, Boy Scouts, Camp Fire Girls, Brownie, Cub Scouts, Explorer Scouts, 4-H members, and to all youth 17 and under. The Youth Forum will include young Amateur radio enthusiasts Andrea Hartlege KG4IUM, former ARRL South Eastern Division Vice Director and Katie Stensrud K7KTI, a young Amateur from Nevada, and many amateur radio educational resources from the ARRL & AMSAT.

PACIFICON 2012 will include numerous amateur radio operations including the convention FCC Special Event Station W6P; the ARRL's W1AW/6; additional stations will be operated remotely from the convention site as well as one portable satellite earth station and one fully automated satellite earth demonstration station. PACIFICON 2012 will offer over 120 educational forums and programs, including a forum hosted by AMSAT on Amateur Satellite Communications, approximately sixteen indoor on-the-air exhibits, and eight outdoor on-the-air exhibits will be hosted.

For more information, please review the PACIFICON 2012 web site at: http://www.pacificon.org/ or, contact Joe Spier, Associate Director for Education, AMSAT-NA, at k6wao@amsat.org

[ANS thanks Joe Spier, K6WAO and Mark Hammond, N8MH for the above information]

ARISS Successful School Contacts

Turkey

Izmir SEV Primary School, located in Turkey, had an Amateur Radio on the International Space Station (ARISS) contact on October 5 via telebridge station K6DUE in Greenbelt, Maryland.

The school participates in the Partner School Science Program, which is a program under Global Friendship Through Space Education, a California-based non-profit organization that promotes friendship among young people from different countries and cultures through the study of space-related science and technology. Students communicate about space-related projects via e-mail, collaborate on research on NASA's distance-learning Web site, and videoconference between NASA and partner schools. First Lego League Robotic Teams and Destination Imagination Teams have been a part of school activities annually since 2005. Invitations to attend this event have been extended to several VIPs including the minister of transportation, the president of the board of education, the director of education, the mayor of Izmir and the governor of Izmir.

Maryland

An Amateur Radio on the International Space Station (ARISS) contact was held between students at the Waxter Young Women's Academy in Laurel, Maryland and Akihiko Hoshide, KE5DNI aboard the ISS on September 24. Telebridge station LU8YY in Argentina handled the radio connection. The girls were able to have all 13 of their questions answered with enough time left to thank Hoshide for participating. Phone lines throughout the center were made available so that other students could listen in as well. The ARISS contact was part of a comprehensive education plan used to interest students in Science, Technology, Engineering and Math (STEM).

Nova Scotia

On September 26, Sacred Heart School of Halifax in Nova Scotia, Canada participated in an Amateur Radio on the International Space Station (ARISS) contact with on-orbit astronaut Sunita Williams, KD5PLB. Telebridge station LU8YY in Argentina connected with Williams, but the international phone line, which was to connect Argentina to Halifax, went down and could not be brought up until after the ISS had passed overhead. Williams agreed to try the contact again on the next pass. Ninety minutes later, the audience of 250 got what they had been waiting for - a successful contact! The students got in 17 questions, and one student was wished a Happy Birthday by the ISS commander.

Video of LaFayette Middle School ISS contact

When Jody Carter was 8 years old, his father tried unsuccessfully to contact the space shuttle via ham radio. Thirty years later, the second time was the charm. The Times Free Press reports that just after 11 a.m. Friday, Sept. 21, Carter, who's now a math and science teacher at LaFayette Middle School, radioed Sunita "Suni" Williams KD5PLB, commander of the International Space Station. Read the full story and watch the video at:
http://tinyurl.com/Lafayette-ISS

[ANS thanks Carol Jackson, KB3LKI for the above information]

US Naval Academy PSAT Features PSK-31 and APRS Transponders

The US Naval Academy in Annapolis, Maryland is developing a new student satellite, ParkinsonSAT, or PSAT which is a two way APRS communications transponder for relaying remote telemetry, sensor and user data from remote environmental experiments or other data sources back to experimenters via a global network of internet linked volunteer ground stations. The data transponder also includes all telemetry, command and control for a complete cubesat.

PSAT is a 1.5 unit cubesat so that two PSATs can be launched from the same P-Pod launcher. The design uses four deployable solar arrays which are stowed down the sides. Half of the 1.5 unit PSAT is available for auxiliary payloads or experiments. Details of the PSAT project are available on-line at: http://www.aprs.org/psat.html

PSAT will fly a PSK-31 transponder with a 10 meter uplink and a 2M FM downlink. PSK-31 will allow up to 30 simultaneous users:
http://aprs.org/psat/PSK31-DESIGN-NOTES.html

Bob Bruninga, WB4APR noted, "PSK-31 is the ideal AMSAT FM transponder for a cubesat. With an FM downlink, anyone can receive it with an HT and a laptop with PSK-31 software. And anyone with a 10m PSK-31 uplink can transmit to it. And since the downlink is FM, everyone tuned in SEES THE SAME WATERFALL and sees EXACTLY where they are in the downlink. A small uplink doppler adjustment can keep each station locked to his chosen channel in the passband. Everyone can talk to everyone if they want, or go one-on-one too."

The SSB uplink and UHF FM downlink transponder fits on a smaller than 3"x3" circuit board being developed by Mirek Kasal at Brno University. Launch of PSAT is planned in 2015. The 3"x3" transponder may also be adaptable for other missions.

[ANS thanks Bob Bruninga, WB4APR for the above information]

Cuba Satellite Group Launches Satellite Net in Havana

Raydel Abreu Espinet, CM2ESP reported this week that the Cuban Satellite Group named Grupo de Radioaficionados para Operaciones Satelitales (GROS) has started a VHF FM Net devoted entirely to the Amateur Radio Satellites on 145.550 MHz. CM2ESP is the Net Control Station. The net will be on the air every Friday from 19:00 to 20:00 local time in Havana.

The net is in range for the Havana Province (capital of Cuba), with coverage also to the surrounding provinces of Mayabeque and Artemisa. The net is divided in three sections: News; A Technical Topic; and Question and Answer Session.

The Cuban Satellite Group named Grupo de Radioaficionados para Operaciones Satelitales (GROS) will continue promoting and creating new activities to increase the presence of Cuban Amateur Radio Stations on the satellites and the activation of new grids. Several demonstrations and workshops are currently being scheduled.

[ANS thanks GROS Coordinator Raydel Abreu Espinet, CM2ESP for the above information]

FUNcube Dongle Filtered Preamp Available at AMSAT-UK On-line Store

David Bowman, G0MRF, a member of the AMSAT-UK FUNcube team, has designed and manufactured a 2m Filtered Preamp for use with the FUNcube dongle or any 2m receiver. This is now available for purchase through the AMSAT-UK web shop.

Two versions of the preamp are available. The first is a kit form including all the components required to build the preamp yourself. The second is a prebuilt version. The stock on the prebuilt version is very limited. Both kit and prebuilt versions are on sale for £47 plus postage and packing.

More information is available on the AMSAT-UK web site. Look under the "Projects" section at http://www.uk.amsat.org to read the construction notes as well as the measurement report carried out on the preamp.

The AMSAT-UK web shop is at http://shop.amsat.org.uk and the premps appear under the "Hardware" category in the catalogue.

A video demonstration of the FUNcube Dongle Pro+ LF/MF/HF/VHF/UHF Software Defined Radio is posted at: http://www.amsat-uk.org/

[ANS thanks Ciaran Morgan, M0XTD of AMSAT-UK for the above information]

Satellite Shorts From All Over

+ AMSAT Director Contests and Awards, Bruce Paige, KK5DO says a correction needs to be made to the AMSAT Field Day Results he sent last week:

Rank	Call	Class	Score	
7	WC9C	4E	15	should be corrected to:
7	WC5C	4F	15	

An article, photos, and the results will be published in an upcoming edition of the AMSAT Journal.

+ The traditional e-mail format of the AMSAT News Service Bulletins is being expanded so that news of Amateur Radio in Space is more accessible on mobile devices:
AMSAT News Service Archives: http://amsat.org/pipermail/ans/
AMSAT-NA on Facebook: http://www.facebook.com/groups/7828379515/
ANS Bulletins will be posted at: http://www.hamradiotoday.com/
(HamRadioToday is an excellent forum of amateur radio topics.)
ANS Bulletins will be posted at: http://www.qrz.com/
The bulletins will continue to be sent via the ANS List and the AMSAT-BB in e-mail format.

+ Watch a video by the Minute Physics folks explaining why the sky is dark at night:
http://www.youtube.com/watch?feature[illegible]ayer_embedded&v[illegible]J4M7tyLRE

+ Astronomy Now and Spaceflight Now have created an interactive iPad guide to the Curiosity rover mission:
http://tinyurl.com/8peyrz8 (itunes.apple.com)

+ Canadian Special Event Station will be signing CG3X until October 28 to commemorate the 50th anniversary of the first Canadian satellite "Alouette". QSL via VE3JPP. (DX Newsletter DXNL 1800 - Oct 3, 2012)

+ Hams like science so get a peek at the eXtreme Deep Field, or XDF, a photo was assembled by combining 10 years of NASA Hubble Space Telescope photographs taken of a patch of sky at the center of the original Hubble Ultra Deep Field. That's right, a 10 year time exposure: http://tinyurl.com/Hubble-XDF (SpaceDaily.com) Also see the article at: http://spaceref.com/news/viewpr.html?pid8692

+ Cool, new postage stamps for your QSL activities featuring America's diverse landscapes on photos taken from ultra lights to satellites are on the Earthscapes stamps. Details of the stamp plus where to find first-day issues can be found in the article at:
http://spaceref.com/news/viewpr.html?pid8738

+ Doug, VK3UM reports updates have been made for his EME Calculation software. New versions are available from Doug's website at

http://www.vk3um.com for:
o EMECalc Ver 8.07 (28th Sep 12)
o EME Planner Ver 1.71. (21st Sep 12)
o EMR Calculator Ver 7.03 (22nd Sep 12)

+ Flex Radio has posted a guide to using SATPC32 with the Flex 5000 VU5K transverter. Along with the SATPC32-specific details, there is information of use to satellite operators in general. See: http://support.flex-radio.com/Downloads.aspx?id@4 (via Alan, WA4SCA)

+ The Houston AMSAT Net meets every Wednesday at 0100z (this is Tuesday evening in North America) on Echolink - Conference *AMSAT* . The MP3 audio is also streamed http://www.amsatnet.com. After the net a Podcast is available at: http://www.amsatnet.com/podcast.xml or iTunes

+ The next Hudson Valley Satcom net dates are Thursday, October 11 and October 25 at 8 PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). An echolink connection is available on the N2EYH-L node. More information at: http://www.hvsatcom.org. (Stu, WA2BSS)

+ The 2012 Great World Wide Star Count is a citizen science project running between October 5 to October 19. You are invited to make night star observations from your QTH and report your results online. To learn more of this project and to participate see: http://www.windows2universe.org/citizen_science/starcount/index.html

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind that the light from the sun, arriving now is 30,000 years old. The energy in the sunlight we see today started out in the core of the Sun 30,000 years ago. It spent most of this time passing through the dense atoms that make the core and just 8 minutes to reach us once it had left the Sun.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM